

Exercises for Tangent Linear/ Adjoint Coding Class

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Exercise 1: Tangent Linear

- Construct routine `COMPBRIGHT_TL.F90` from forward code `COMPBRIGHT.F90` and test using techniques learned today
- Low level routines `Planck`, `Bright`, `Planck_TL`, and `Bright_TL` and their testing routines are provided for reference.

Exercise 2: Adjoint

- Construct routine `COMPBRIGHT_SAVE_AD.F90` from TL code `COMPBRIGHT_TL_SAVE.F90` and test using techniques learned today.
- Low level routines `PLANCK.F90`, `BRIGHT.F90`, `PLANCK_TL.F90`, `Bright_AD.F90`, `Planck_AD.F90`, `Bright_AD.F90`, `COMPBRIGHT_SAVE.F90` and `COMPBRIGHT_SAVE_TL.FOR` and their testing routines are provided.

Exercise 3: Jacobian

- Write `COMPBRIGHT_SAVE_K.F90` based upon `COMBRIGHT_SAVE_AD` which I have provided.
- Test this routine using techniques we have learned today.